

# AirConnect® Wireless PCI Card User Guide

**3CRWE777A** 

http://www.3com.com/ http://www.3com.com/productreg

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### **CONTENTS**

# 1 OVERVIEW Introduction 1 Package Checklist 1 Hardware Description 2 Features 2 Applications 2 Status LED Indicator 3 System Requirements 4

### 2 Installation

Introduction 5
Card Installation Procedure 5
Windows 95/98/2000/Me Driver Installation Procedure 7
Windows NT 4.0 Driver Installation Procedure 9

### 3 Network Configuration and Planning

Introduction 13

Network Topologies 13

Ad hoc Wireless LAN 13

Infrastructure Wireless LAN 14

Setting the Communication Domain 15

Stationary Wireless PCs 15

Roaming Wireless PCs 15

### 4 CONFIGURATION AND DIAGNOSTIC UTILITY

Introduction 17
Installing the Wireless LAN Configuration Utility 17
Using the Wireless LAN Configuration Utility 17
Link Information Screen 18
Configuration Screen 19
Encryption Screen 21

### **5** TROUBLESHOOTING

Introduction 23
Preliminary Troubleshooting 23
PCI Compatibility 23
Network Connection Problems 24

### **6** TECHNICAL SPECIFICATIONS

Specifications 27

### **A** TECHNICAL SUPPORT

Online Technical Services 29
World Wide Web Site 29
3Com FTP Site 29
Support from Your Network Supplier 30
Support from 3Com 30
Returning Products for Repair 32

### INDEX

WARRANTY AND REGULATORY COMPLIANCE

### **OVERVIEW**



### Introduction

3Com's Wireless PCI Card is an 11 Mbps wireless network adapter that seamlessly integrates with existing Ethernet networks to support applications such as mobile users or temporary conferences. This solution offers a high data rate and reliable wireless connectivity with considerable cost savings over wired LANs (which include long-term maintenance overhead for cabling). Just install PCI adapters into your notebook PCs, and start networking.

Using this card in conjunction with 3Com's AirConnect Access Point, you can create an instant network that integrates seamlessly with 10 Mbps Ethernet LANs. Moreover, moving or expanding your network is as easy as moving or installing additional access points - no wires!

### **Package Checklist**

The Wireless PCI Card package includes:

- One wireless PCI card (3CRWE777A)
- One CD containing drivers and utilities
- This Wireless PCI Card User Guide
- One registration card (please complete and return)

Please inform your dealer if there are any incorrect, missing or damaged parts. If possible, retain the carton, including the original packing materials. Use them again to repack the product in case there is a need to return it for repair.

### **Hardware Description**

3Com's Wireless PCI Card supports 1, 2, 5.5, and 11 Mbps half-duplex connections to Ethernet networks. This card is fully compliant with 2.4GHz DSSS CSMA/CA wireless networking as defined in IEEE 802.11b. It is designed to complement PCI Local Bus computers. It supports Windows 95/98/NT/2000/Me.

### **Features**

- 1, 2, 5.5, and 11 Mbps data rate.
- Wireless connection without the difficulties and cost of cabling
- Greater flexibility to locate or move networked PCs
- Integrates with or replaces wired LANs at dramatically lower cost than wired alternatives
- Seamless connectivity to wired Ethernet LANs augments existing networks quickly and easily
- Easy installation
- Operating range up to 30m (100 ft) at 11 Mbps , up to 100m (300 ft) at 5.5 Mbps and lower
- Point-to-point and point-to-multipoint access
- Direct Sequence Spread-Spectrum (DSSS) technology provides robust, interference-resistant and secure wireless connection
- Supports a wide range of operating systems (Win95/98/NT/2000/Me)
- Plug-and-Play
- Provides a user-friendly interface for configuration
- Enhances your network security with WEP data encryption

### **Applications**

3Com wireless products offer a fast, reliable, cost-effective solution for wireless client access to the network in applications like these:

Remote access to corporate network information:
 E-mail, file transfer and terminal emulation.

- Difficult-to-wire environments:
   Historic or old buildings, asbestos installations, and open areas where wiring is difficult to employ.
- Frequently changing environments:
   Retailers, manufacturers and banks who frequently rearrange the workplace and change location.
- Temporary LANs for special projects or peak times:
   Trade shows, exhibitions and construction sites that need a temporary setup for a short time period.

   Retailers, airline, and shipping companies that need additional workstations for peak periods.
   Auditors who require workgroups at customer sites.
- Access to database for mobile workers:
   Doctors, nurses, retailers, and white-collar workers who need access to databases while being mobile in the hospital, retail store, or office campus.
- SOHO (Small Office and Home Office) users:
   SOHO environments needing easy and quick installation of a small computer network.

### **Status LED Indicator**

The Wireless PCI Card includes one status LED indicator, as described in the following figure and table.

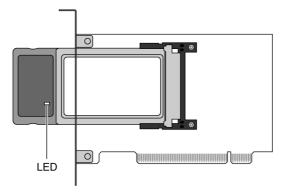


Figure 1

Always On	Blinking	Off
<ul> <li>Power is being supplied to the PCI card.</li> <li>A valid connection to the network exists.</li> <li>The PCI card is transmitting or receiving data.</li> </ul>	The PCI card is attempting to associate with an access point.	No power is being supplied to the PCI card.

### **System Requirements**

Before you install the wireless PCI card, check your system for the following requirements:

- Windows 95/98/NT/2000/Me operating system (prepare the Windows installation CD-ROM for use during installation).
- A minimum of 500 Kbytes of free disk space for installing the driver and utility program.
- Other IEEE 802.11b-compliant devices installed in your service area (such as 3Com's AirConnect access point and wireless PC card.

### 2

### **INSTALLATION**

### Introduction

Before Installing the 3Com Wireless PCI Card, be sure you read and follow the precautions listed here:

- Network cards are sensitive to static electricity.
   To protect the card, always touch the metal chassis of your computer before handling the card.
- Be sure to turn off power to your computer before you plug in or remove a wireless PCI card.

### **Card Installation Procedure**

- 1 Turn off power to your desktop computer and unplug the power cord.
- 2 Remove the cover of your computer.
- 3 Locate an empty PCI slot and remove its slot cover. Save the screw.
- 4 Carefully insert the PCI card into the selected slot until it seats snugly (see Figure 2). The shielded part of the wireless PCI card protrudes from the card faceplate and juts out beyond the back panel of your computer when the card is installed.



CAUTION: DO NOT REMOVE the shielded part of the PCI card from the printed circuit carrier.

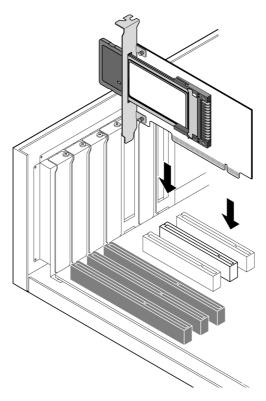


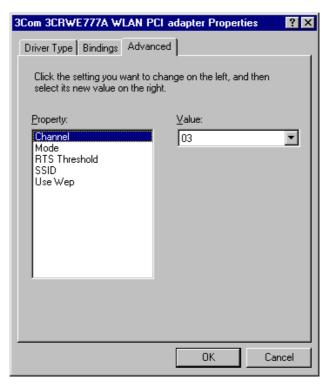
Figure 2

- 5 Secure the card with the screw that you removed earlier.
- 6 Replace the cover of your PC and plug in the power cord.
- 7 Turn on the power to your computer.
- 8 Depending on your operating system, proceed to either "Windows 95/98/2000/Me Driver Installation Procedure" or "Windows NT 4.0 Driver Installation Procedure".

### Windows 95/98/2000/Me Driver Installation Procedure

Your *End User Utilities* CD contains all the software drivers available for the 3Com Wireless PCI Card. New or updated drivers can be downloaded from 3Com's web site at http://www.3Com.com.

- 1 Windows 95/98/2000/Me will automatically detect the new hardware and prompt you to install the driver. Click "Next" to find the driver.
- 2 Insert the CD and click "Next".
- 3 Specify the CD drive and click "Next". The setup program automatically finds the appropriate .INF file and driver for your operating system.
- 4 Click "Next" to copy files from the CD.
- 5 The Adapter Properties window appears, showing the Advanced tab screen.



- 6 If you are setting up an ad hoc wireless LAN, set "Channel" to the same radio channel as that used by the other wireless clients in your group. However, if you are connecting to a network via an access point, then use the same channel as that used by the access point (access point default: 3).
- 7 Set "Mode" to ad hoc or infrastructure, depending on the type of network you want to connect to. Click *OK* (default: infrastructure).
- 8 Set "RTS Threshold" to the same as that used by the other devices in your network (access point default: 2432).
- 9 Set the "SSID" identifier to the same as that used by the ad hoc workgroup or access point you want to connect to (access point default: 101).
- 10 For more secure data transmission, set the "Use WEP" to "Enabled" to ensure wireless network security. The advanced Wired Equivalent Privacy (WEP) is implemented in this card to prevent unauthorized access (default: Disabled).



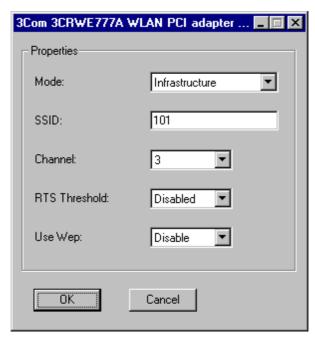
If the access point you wish to connect to is set for encryption, you must also enable encryption on the wireless client. Click Encryption in the Wireless LAN Configuration Utility to go to screens where you can enable and configure encryption.

You must set the wireless client for the same encryption algorithm and shared key values as the access point it will associate with. Save the configuration settings and exit by clicking OK.

- 11 Click "OK". At this point, depending on how your computer is configured, Windows 98/98SE may prompt you to insert the Windows 98/98SE installation CD to copy required system files. Follow the instructions displayed, then click "Finish."
- 12 Restart your computer when prompted.

### Windows NT 4.0 Driver Installation Procedure

- 1 From the Windows desktop, select "Control Panel," double-click "Network," click "Adapters," and then click the "Add" button on the Network dialog box.
- 2 Windows NT will present a list of all its supported adapters. Click "Have Disk" to continue.
- 3 Windows NT will ask for the drive/path containing the Windows NT drivers. Insert the CD into the drive, specify the drive letter of the CD, then click "OK."
- 4 When prompted, select 3Com 3CRWE777A WLAN PCI adapter, then click "OK."
- Windows NT will attempt to locate the SYS and INF files in the specified path. If you have entered the path name correctly, Windows NT should copy the appropriate drivers to the Windows NT system. You must confirm the selection by clicking "OK."
- 6 The Adapter Properties dialog box appears. Configure the card as described below, and click "OK."



- **Mode** Set to "ad hoc" or "infrastructure", depending on the type of network you want to connect to.
- **SSID** Set the "SSID" identifier to the same as that used by the ad hoc workgroup or access point you want to connect to. (access point default: 101).
- **Channel** If you are setting up an ad hoc wireless LAN, set the channel number to the same radio channel used by the other wireless clients in your group. However, if you are connecting to a network via an access point, then use the same channel as that used by the access point (access point default: 3).
- **RTS Threshold** Set the RTS threshold to the same as that used by the other devices in your network (default: Disabled).
- **Use WEP** For more secure data transmission, set this field to "Enabled" to ensure wireless network security. Wired Equivalent Privacy (WEP) is implemented in the PCI card to prevent unauthorized access (default: Disabled).



If the access point you wish to connect to is set for encryption, you must also enable encryption on the wireless client. Click Encryption in the Wireless LAN Configuration Utility to go to screens where you can enable and configure encryption.

You must set the wireless client for the same encryption algorithm and shared key values as the access point it will associate with. Save settings and exit by clicking OK.

7 If desired, select the Services tab and Click "Add..." to install the network protocols you want to use, such as IPX/SPX, NetBEUI or TCP/IP.

If you install TCP/IP, be sure to set the appropriate gateway, DNS server, and domain for your network. If you install an IPX/SPX-compatible protocol, then you also need to install the Client for NetWare Networks.

8 Click "Close."

- 9 Restart your computer when prompted.
- 10 To ensure that the 3Com Wireless PCI Card works correctly, go to the Windows *Control Panel* and double-click *Devices*. The 3Com Wireless PCI Card driver status should be "Started."

## 3

### NETWORK CONFIGURATION AND PLANNING

### Introduction

3Com's Wireless Solution supports a stand-alone wireless network configuration, as well as an integrated configuration with 10 Mbps Ethernet LANs.

The Wireless PCI card can be configured as:

- Ad hoc for departmental or SOHO LANs
- Infrastructure for enterprise LANs

### **Network Topologies**

### Ad hoc Wireless LAN

An ad hoc wireless LAN consists of a group of computers, each equipped with a wireless adapter, connected via radio signals as an independent wireless LAN. Computers in a specific ad hoc wireless LAN must therefore be configured to the same radio channel. An ad hoc wireless LAN can be used for a branch office or SOHO operation.

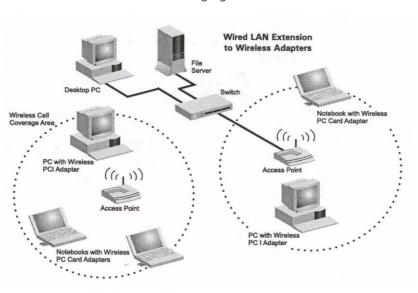


### Infrastructure Wireless LAN

The wireless PCI card can also provide access to a wired LAN for wireless workstations. An integrated wired and wireless LAN is called an infrastructure configuration. A Basic Service Set (BSS) consists of a group of wireless PC users, and an access point that is directly connected to the wired LAN. Each wireless PC in this BSS can talk to any computer in its wireless group via a radio link, or access other computers or network resources in the wired LAN infrastructure via the access point.

The infrastructure configuration not only extends the accessibility of wireless PCs to the wired LAN, but also doubles the effective wireless transmission range for wireless PCs by passing their signal through one or more access points.

A wireless infrastructure can be used for access to a central database, or for connection between mobile workers, as shown in the following figure.



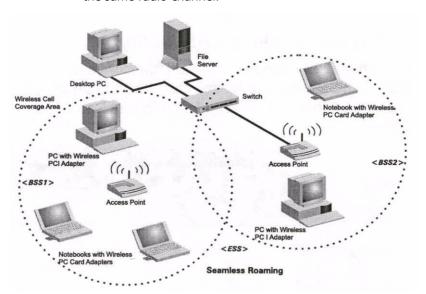
### **Setting the Communication Domain**

### **Stationary Wireless PCs**

The Basic Service Set (BSS) is the communication domain for each 3Com wireless access point (AP). For wireless PCs that do not need to support roaming, set the domain identifier (SSID) for the wireless card to the BSSID of the AP you want to connect to. Ask your administrator for the BSSID of the AP point he or she wants you to connect to.

### **Roaming Wireless PCs**

A wireless infrastructure can also support roaming for mobile workers. More than one access point can be configured to create an Extended Service Set (ESS). By placing the access points so that a continuous coverage area is created, wireless users within this ESS can roam freely. All AirConnect cards and access points within a specific ESS must be configured with the same SSID and to the same radio channel.



Before setting up an ESS for roaming, you need to choose a clear radio channel and ideal location for the access points to maximize performance.

### 4

### CONFIGURATION AND DIAGNOSTIC UTILITY

### Introduction

3Com's Wireless PCI Card provides free optional management software for quick network configuration and easy diagnostics. The CD that comes with your package contains a user-friendly utility for configuring the wireless PCI card.

### **Installing the Wireless LAN Configuration Utility**

To install this utility:

- 1 Insert the CD in your computer's CD-ROM drive. The AirConnect main menu appears.
- 2 Click Installation for Windows from the menu screen.
- 3 Click Install WLAN Applications from the menu.
- 4 Follow the onscreen instructions to finish installation.

### **Using the Wireless LAN Configuration Utility**

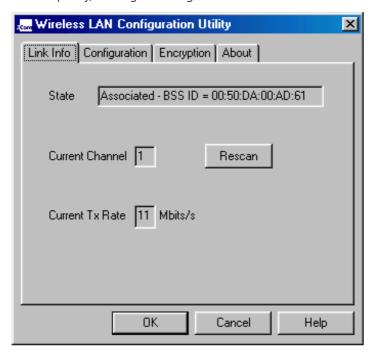
Once the installation is completed, the configuration utility can be accessed by selecting the "Configuration Utility" icon from the "3Com AirConnect Utility" folder.

The configuration software includes the following functions:

- Link Information Allows you to monitor network status.
- Configuration Allows you to configure parameters for the wireless adapter.
- Encryption Provides RC4 security control.

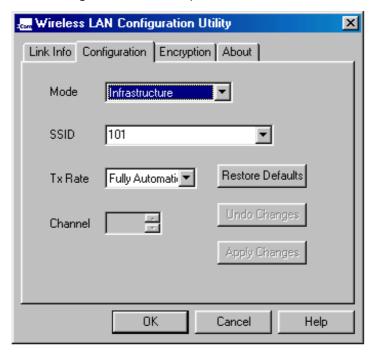
### **Link Information Screen**

When you start the wireless LAN utility, the hardware information window for the wireless PCI card is shown on the first folder of the utility windows. Click on the "Link Information" tab to monitor the network status of the wireless adapter, including the BSSID, current channel, transmission rate used, transmission/receiving throughput, link quality, and signal strength condition.



### **Configuration Screen**

The Configuration screen allows you to check and modify the configuration of the adapter.

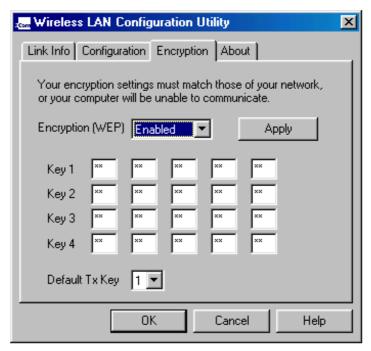


The user-configurable parameters are:

- Mode Set the station operation mode to AdHoc for network configurations that do not have any access points, or to Infrastructure for configurations with access points ("Ad hoc" is the default setting).
- **SSID** Input an SSID number if the roaming feature is enabled ("101" is the default setting).
- **Tx Rate** Indicates the communication rates. Select appropriate transmission speed to match your wireless LAN settings ("Fully Automatic" is the default setting).
- WEP For more secure data transmission, select "Enabled" to use WEP security. The advanced Wired Equivalent Privacy (WEP) is implemented in this card to prevent unauthorized access. However, for normal use it is recommended to retain the factory-set "Disabled" WEP. ("Disabled" is the default setting).
- Channel If you are setting up an Ad hoc wireless LAN, set the channel number to the same radio channel as that used by the other wireless clients in your group. However, if you are connecting to a network via an access point, then use the same channel as that used by the access point (access point default: 3).

### **Encryption Screen**

The WEP (Wired Equivalent Privacy) implemented in 3Com's wireless PCI card is based on an RC4 encryption algorithm and provides a 40-bit security key to ensure data confidentiality. This WEP security protects your wireless LAN against eavesdropping and unauthorized access by hackers or other intruders. If the WEP is in use, the WEP key is required for connecting to an access point or listening to messages that pass through the air.



To use the WEP function, take the following steps:

- 1 Click on the Encryption tab to set up WEP security keys.
- 2 Select Enabled for the WEP field.
- 3 Select one encrypted key (from Key 1 to Key 4) as your default key.
- 4 Click the Apply button.

### **TROUBLESHOOTING**



### Introduction

This chapter describes troubleshooting procedures you can perform to solve basic problems.

### **Preliminary Troubleshooting**

Check the following items before contacting 3Com Technical Support.

### PCI Compatibility

Some PCI computers are not self-configuring and require you to perform some or all of the following functions by motherboard jumper changes and/or BIOS Setup program configuration:

- Make sure your BIOS correctly supports the PCI Local Bus Specification v2.0 or later and upgrade your computer BIOS to the latest version.
- Verify that the PCI slot is an enabled bus-master slot and not a slave PCI slot. In some computers, the PCI slot must be configured to enable bus mastering. Refer to your computer's manual and check the PCI BIOS Setup program to be sure the PCI slot is an enabled bus-master slot.
- In some computers, you may be required to disable Plug-n-Play (PnP) in the BIOS Setup program if resources are not properly assigned between installed cards.
- Some computers may require you to reserve interrupts and memory addresses for installed ISA cards to prevent PCI adapters from using the same settings. Refer to your computer's manual and check the PCI BIOS Setup program configuration options for ISA cards.

- Make sure the PCI slot is configured to support INTA.
- Be sure that INTA for the slot is assigned to a free interrupt (IRQ) number.
- If it still does not work, remove the wireless adapter.
   Delete the appropriate system file (see list below) from c:\windows\system:

■ Windows 9x: cw10.sys

■ Windows 2000: cw10nt.sys

Windows Me: cw10nt.sys

Go to "Control Panel" and delete the wireless PCI card from your network configuration menu. Restart your computer and reinstall the card as described in Chapter 2.

### **Network Connection Problems**

If the Link LED on the wireless PCI card does not light, or if you cannot access any network resources from the computer, check the following:

- Make sure the correct software driver is installed for your operating system. If necessary, try reinstalling the driver.
- Make sure the computer and other network devices are receiving power.
- The access point you want to attach to may be defective. Try using another access point.
- If you cannot access a Windows or NetWare service on the network, check that you have enabled and configured the service correctly. If you cannot connect to a particular server, be sure that you have access rights and a valid ID and password.
- If you cannot access the Internet, be sure you have configured your system for TCP/IP.

If your wireless station cannot communicate with a computer in the Ethernet LAN when configured for Infrastructure mode, check the following:

- Make sure the access point which the station associated with is powered on.
- Make sure your wireless station is configured with the same operating radio channel as the access point.
- If you still cannot connect, change the access point and all the stations within the BSS to another radio channel.
- Make sure the BSSID is the same as the access point for a station with roaming disabled, or the SSID is the same as the access point for a station with roaming enabled.

### TECHNICAL SPECIFICATIONS



### **Specifications**

### **General Specifications**

**Functional Criteria** 

Data Rate: 1, 2, 5.5, 11 Mbps

Transmission Mode Half duplex

**Network Connection** IEEE 802.11b - wireless

Up to 30m (100 ft) at 11Mbps **Operating Range** 

Up to 100m (300 ft) at 5.5 Mbps or

lower

INTA Interrupt

Radio Signal

Signal Type Direct Sequence Spread-Spectrum

(DSSS)

USA & Canada: 2.400-2.4835 GHz Operating Frequency

Europe: 2.400-2.4835 GHz Japan: 2.400-2.497 GHz

Sensitivity 1, 2, 5.5 Mbps: -80 dBm

11 Mbps: -76 dBm (typical)

Modulation CCK, BPSK, QPSK

**Physical Characteristics** 

**Power Consumption** 5V, 480 mA transmit

360 mA receive

178 x 120 x 20 mm (7 x 4.7 x 0.8 in) Dimensions

Antenna Built-in

LFD Indicator AdHoc, Infrastructure, AP link

Host Interface PCI Specification 2.1 IEEE 802.11b

**Standards Conformance** 

**Environmental** 

Operating: 0 to 50° C (32 to 122° F) **Temperature** 

Storage: 0 to 70° C, (32 to 158° F)

Humidity 5 to 80% (non-condensing)

Vibration/Shock/Drop IEC 68-2-34, IEC 68-2-27, IEC 68-2-32

### Certification

CE Mark EN55022 Class B, EN 55024,

IEC 61000-4-2/3/4/6/11

Emissions FCC Part 15(B), ETS 300-328,

RCR STD-33 A

**Software Drivers** 

NDIS Drivers Windows 95

Windows 98 Windows 2000 Windows NT 4.0

Windows Millennium Edition

### **A**

### TECHNICAL SUPPORT

### Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site
- 3Com FTP site

### World Wide Web Site

Access the latest networking information on the 3Com Corporation World Wide Web site by entering the URL into your Internet browser:

http://www.3com.com/

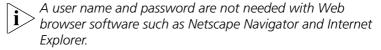
This service provides access to online support information such as technical documentation and software library, as well as support options ranging from technical education to maintenance and professional services.

### 3Com FTP Site

Download drivers, patches, software, and MIBs across the Internet from the 3Com public FTP site. This service is available 24 hours a day, 7 days a week.

To connect to the 3Com FTP site, enter the following information into your FTP client:

- Hostname: ftp.3com.com (or 192.156.136.12)
- Username: anonymous
- Password: <your Internet e-mail address>



### **Support from Your Network Supplier**

If additional assistance is required, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

### **Support from 3Com**

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, please call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable Below is a list of worldwide technical telephone support numbers:

Country	Telephone Number	Country	Telephone Number
Asia Pacific Rim Australia Hong Kong India Indonesia Japan Malaysia New Zealand Pakistan Philippines	1 800 678 515 800 933 486 +61 2 9937 5085 001 800 61 009 03 5783 1270 1800 801 777 0800 446 398 +61 2 9937 5085 1235 61 266 2602	P.R. of China Singapore S. Korea From anywhere in S. Korea: From Seoul: Taiwan, R.O.C. Thailand	10800 61 00137 or 021 6350 1590 800 6161 463 00798 611 2230 (0) 2 3455 6455 0080 611 261 001 800 611 2000
Europe From anywhere in Europe, call:	+31 (0)30 6029900 ph +31 (0)30 6029999 fax		
From the follow	wing European countri	es, you may use	the toll-free numbers:
Australia Austria Belgium Denmark Finland France Germany Hong Kong Hungary Indonesia Ireland Israel Italy Malaysia Netherlands	1800 678 515 0800 297468 0800 71429 800 17309 0800 113153 0800 917959 0800 1821502 800 933 486 06800 12813 001 80061 009 1 800 553117 1 800 9453794 800 879489 1800 801777 0800 0227788	New Zealand Norway P.R. of China Phillipines Poland Portugal Singapore South Africa South Korea Spain Sweden Switzerland Taiwan, R.O.C. Thailand U.K.	0800 446 398 800 11376 10 800 61 00137 1235 61 266 2602 0800 3111206 0800 831416 800 616 1463 0800 995014 00798 611 2230 900 983125 020 795482 0800 55 3072 0080 611 261 001 800 611 2000 0800 966197
<b>Latin America</b> Argentina Brazil Chile Colombia	AT&T +800 666 5065 0800 13 3266 0800 13 3266 98012 2127	Mexico Peru Puerto Rico Venezuela	AT&T +800 778 5573 AT&T +800 666 5065 800 666 5065 AT&T +800 666 5065
North America	1 800 527 8677		

### **Returning Products for Repair**

Before you send a product directly to 3Com for repair, you must first obtain a Return Materials Authorization (RMA) number. Products sent to 3Com without RMA numbers will be returned to the sender unopened, at the sender's expense.

To obtain an RMA number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	65 543 6500	65 543 6348
Europe, South Africa, and Middle East	+ 44 1442 435860	+ 44 1442 435718

From the following European countries, you may call the toll-free numbers; select option 2 and then option 2:

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### **INDEX**

Numbers 3Com FTP site 29 3Com technical support telephone numbers 30 3Com URL 29	D Data rate 27 Driver installation 7 Windows NT 4.0 9 Drivers, NDIS 28
A Ad hoc mode 20 Ad hoc wireless LAN 13 Applications 2  B Basic Service Set (BSS) 14, 15	E  Encryption    configuring 8, 10, 20, 21    screen 21    security keys 21    Wired Equivalent Privacy (WEP) 20 Extended Service Set (ESS) 15
Dasic Service Ser (DSS) 14, 15	<del>_</del>
Card installation 5 Certification 28 Channel configuring 20 Characteristics environmental 27 operating range 27 physical 27 Configuration screen 19 Configuring channel 20 encryption 8, 10, 20, 21 mode 20 roaming wireless PCs 15 security keys 21 SSID 20	Features 2 data rate 2 DSSS technology 2 operating range 2 Frequency, operating 27 FTP site, 3Com 29  Indicator, status LED 3 Infrastructure mode 20 Infrastructure wireless LAN 14 Installation driver 7 encryption 8, 10 PCI card 5 precautions 5
for roaming wireless PCs 15 for stationary wireless PCs 15 stationary wireless PCs 15 transmission rate 20	wireless LAN configuration utility 17
	L LED status indicator 3 Link information screen 18

Status LED indicator 3 System requirements

802.11b-compliant devices 4 free disk space 4 operating system 4

M MIBs 29 Mode ad hoc 20 configuring 20 infrastructure 20	T Technical specifications 27 Technical support 30 3Com URL 29 product repair 32 telephone numbers 30 Transmission mode 27 Transmission rate configuring 20
Network connection, troubleshooting 24 Network topologies ad hoc 13 infrastructure 14	Troubleshooting network connection 24 PC compatibility 23 preliminary steps 23
O Online technical services 29 Operating frequency 27 Operating range 27	URL 29 Utility, wireless LAN configuration installing 17 using 17
P Package checklist 1	WEP (see also encryption) 20, 21 Wired Equivalent Privacy (WEP) 21 Wireless gateway applications 2
Radio signal type 27 Range, operating 27 Returning products for repair 32 Roaming wireless PCs 15	features 2 general description 1 hardware description 2 Wireless LAN ad hoc 13
S Screens encryption 21 link information 18 wireless LAN configuration 19 Security keys, configuring 21 Specifications, technical 27 SSID, configuring 20 for roaming wireless PCs 15 for stationary wireless PCs 15 Stationary wireless PCs 15	infrastructure 14 Wireless LAN configuration screen 19 Wireless LAN configuration utility installing 17 using 17 World Wide Web (WWW) 29

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### 3Com Corporation

5400 Bayfront Plaza Santa Clara, CA 95054 U.S.A. (408) 326-5000 January 3, 2000

### **Regulatory Compliance Information**

### RADIO FREQUENCY INTERFERENCE REQUIREMENTS

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commissions Rules and Regulation. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

### **CSA STATEMENT (CANADA)**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dens le Règlement sur le brouillage radioélectrique édicté par l'Industrie.

### JAPAN VCCI CLASS B COMPLIANCE



This is a Class B equipment based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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### **CE MARK DECLARATION OF COMPLIANCE**



This is to certify that this product complies with ISO/IEC Guide 22 and EN45014. This product complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC, and carries the CE Mark accordingly.

This product conforms to the following specifications:

EMC: EN55022(1988)/CISPR-22(1985)

class B IEC 61000-4-2(2000) 4kV CD, 8kV AD 3V/m

IEC 61000-4-3(2000) IEC 61000-4-4(2000) IEC 61000-4-6(2000) 1kV - (power line)

3Vrms IEC 61000-4-11(2000) 3Vrms

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